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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,687	11/04/2003	Stephen Kaminski	Q78089	4929

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EXAMINER	
SANTIAGO CORDERO, MARIVELISSE	
ART UNIT	**PAPER NUMBER**
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,687	KAMINSKI ET AL.	
	Examiner	Art Unit	
	Marivelisse Santiago-Cordero	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on 6/8/07, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below. Although the Wood reference (cited in IDS filed on 2/12/04) is still used, a different embodiment is relied upon.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

William Trost

Claim Objections

2. Claims 1-15 are objected to because of the following informalities: the term "of" should be deleted after the terms "receiving" (Claim 1, line 2; Claim 2, line 1; Claim 3, line 2; claim 8, line 2; claim 10, line 2), "mapping" (claim 5, line 5), "replacing" (claim 5, line 7), "inputting" (claim 7, line 3), and "selecting" (claim 9, lines 5 and 6). Appropriate correction is required.

3. Claim 6 is objected to because the terms "UMTS", "HSDPA", and "WLAN" are acronyms, which could mean different things and/or change in meaning overtime, hence it would be desirable to write the actual words to which the acronyms refers.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the required quality of service" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-4 and 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of Dunlop et al. (hereinafter "Dunlop"; Pub. No.: US 2004/0203796).

Regarding claim 1, Wood discloses a telecommunication method comprising the steps of:

selecting a sub-set of air interfaces (Fig. 2, reference 14; col. 3, lines 40-44; note the list of compatible air interfaces provided from the controller to base) from a set of air interfaces (Fig. 2, reference 13; col. 3, lines 34-39; note the list of air interface capabilities of the subscriber and base forwarded to the controller), the sub-set containing air interfaces (Fig. 2, reference 13; col. 3, lines 40-44),

providing the sub-set to a node of a radio access network having the set of air interfaces (Fig. 2, reference 31; col. 3, lines 40-44, note the base 44),

selecting an air interface from the sub-set by the node (Fig. 2, references 33, 35, 19; col. 3, lines 45-50).

Wood fails to specifically disclose receiving of a required quality of service parameter set from a core network by a radio network controller, the air interfaces which support the required quality of service parameter set, and for providing the required quality of service to a user equipment.

However, in the same field of endeavor, Dunlop discloses receiving of a required quality of service parameter set from a core network by a radio network controller (Fig. 2; paragraphs [0009]-[0015], [0038], [0042]), the air interfaces which support the required quality of service parameter set (paragraphs [0009]-[0015], [0038], [0042]), and for providing the required quality of service to a user equipment (paragraphs [0009]-[0015], [0038], [0042]).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to receive of a required quality of service parameter set from a core network by a radio network controller, the air interfaces which support the required quality of service parameter set, and to provide the required quality of service to a user equipment of Wood as suggested by Dunlop for the advantages of achieving required contractual levels of commitment to a multiplicity of users (Dunlop: paragraph [0008]), enabling network operators to converge their communication technologies by enabling the selection of the air interface technology that will best serve the user requirements dynamically (Dunlop: paragraph [0009]),

allowing the effective management of resources (Dunlop: paragraph [0014]), and making an optimal decision (Dunlop: paragraph [0015]).

Regarding claim 2, in the obvious combination, Wood discloses further comprising receiving of a monitoring list by the radio network controller (Fig. 2, reference 13; col. 2, lines 34-40), the monitoring list containing the set of air interfaces by means of which the node can actually establish a telecommunication link with the user equipment (Fig. 2; col. 3, lines 34-50).

Regarding claim 3, in the obvious combination, Wood discloses further comprising the steps of: receiving of data being indicative of at least one of the air interfaces of the set of air interfaces (col. 3, lines 34-50), the at least one interface having no more free data transmission capacity (col. 2, lines 48-51; col. 3, lines 44-50),

eliminating the at least one air interface from the sub-set (col. 2, lines 58-62; col. 3, lines 40-50).

Regarding claim 4, in the obvious combination, Wood discloses whereby the selection of the air interface is performed by the node on load balancing and/or actual availability of the air interface (col. 3, lines 44-50).

Regarding claim 7, which recites a computer-readable medium version of claim 1, see rationale as previously discussed above. In addition, note that the computer-readable medium is inherently present given that Wood shows a process; the process would be implemented by a processor that requires a "computer-readable medium", e.g., a RAM, to function.

Regarding claim 8, which recites a radio network controller of a radio access network version of claim 1, see rationale as previously discussed above. In addition, see Wood (Fig. 4, reference 45) and Dunlop (Fig. 2).

Regarding claim 9, which recites a node of a radio access network having a set of air interfaces version of claims 1 and 4, see rationale as previously discussed above. In addition, see Wood (Figs. 2 and 4, reference 43).

Regarding claim 10, which recites a telecommunication system version of claims 1 and 9, see rationale as previously discussed above. In addition, see Wood (Figs. 2 and 4) and Dunlop (Fig. 2).

Regarding claim 11, in the obvious combination, Wood discloses further comprising:

storing said set of air interfaces by the radio network controller (col. 3, lines 28-33) selecting by the radio network controller the sub-set of air interfaces from said set of air interfaces (col. 3, lines 33-50) by referencing a list comprising air interfaces and corresponding quality of service parameters (col. 3, lines 15-19 and 34-60), wherein the list is stored in the radio network controller (col. 3, lines 28-50); and providing by the radio network controller to the node the selected sub-set of air interfaces (Fig. 2; col. 3, lines 40-43).

Regarding claim 12, in the obvious combination, Wood discloses further comprising storing, by the node, medium access control components corresponding to respective air interfaces available at the node (col. 2, lines 26-28; col. 3, lines 34-50; note that the medium access control components are an inherent feature and/or an obvious expedient thereof), wherein said node selects the air interface (Fig. 2; references 13, 17-24; col. 3, lines 34-50) and maps the selected air interface to a corresponding medium access control component (Fig. 2, references 13, 17-24; col. 2, lines 40-43; col. 3, lines 34-50).

Regarding claim 13, in the obvious combination, Wood discloses further comprising changing by the node the selected air-interface to another air interface, wherein said another

interface is selected by the node form the provided sub-set of air interfaces without communicating with the radio network controller (Fig. 4; col. 2, lines 28-31 and 64-667; col. 3, lines 34-50; note the node fairly characterized as base site 43).

Regarding claim 14, in the obvious combination, Wood discloses further comprising the node changing the selected air interface to another air interlace selected on the fly from the provided sub-set of air interfaces (Figs. 1-2 and 4, reference 43; col. 2, lines 28-30 and 58-67; col. 3, lines 34-50), wherein said changing further comprises remapping data of the user equipment from a current physical layer to a different physical layer (col. 1, lines 24-27 and 35-43; col. 2, lines 58-67; col. 3, lines 33-50; note that the physical layers are inherently present in the different communication systems).

Regarding claim 15, in the obvious combination, Wood discloses wherein the sub-set of air interfaces comprises at least two air interfaces (col. 3, lines 40-47).

8. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of Dunlop, as applied to claim 1 above, and further in view of Stockhusen (Pub. No.: US 2002/0132636).

Regarding claim 5, Wood in view of Dunlop disclose the method of claim 1 (see above), further comprising the steps of:

establishing a first telecommunication link by means of the selected one of the set of air interfaces (col. 3, lines 47-50) and sending of data frames having a first data frame format of the selected air interface (col. 3, lines 47-50; note that this is inherently present and/or an obvious expedient thereof).

Wood in view of Dunlop fails to specifically disclose mapping of the first data frame format to a second data frame format of an alternative one of the set of air interfaces, replacing of the selected air interface by the alternative interface and sending of the mapped data frames having the second air interface format via a second telecommunication link which has been established by means of the alternative air interface.

Note, however, that Wood does disclose the ability to shift systems gradually from one air interface to another (col. 4, lines19-22), thus disclosing an alternative one of the set of air interfaces.

Nevertheless, in the same field of endeavor, Stockhusen discloses mapping of the first data frame format to a second data frame format of an alternative one of the set of air interfaces (paragraph [0027]), replacing of the selected air interface by the alternative interface (paragraph [0027]) and sending of the mapped data frames having the second air interface format via a second telecommunication link which has been established by means of the alternative air interface (paragraph [0027]).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to map of the first data frame format to a second data frame format of an alternative one of the set of air interfaces, and replace of the selected air interface by the alternative interface and sending of the mapped data frames having the second air interface format via a second telecommunication link which has been established by means of the alternative air interface as suggested by Stockhusen for the advantages of controlling and managing the switching between two or more modes or networks utilizing different air interface standards (Stockhusen: paragraphs [0004], [0027]) and enabling the making of adaptations for

handling the different parameters used by the different technologies (Stockhusen: paragraph [0027]).

Regarding claim 6, although Wood in combination with Dunlop and Stockhusen disclose non-limiting air interface standards from multiple networks (see, e.g., Wood: col. 1 lines 14-43 and Stockhusen: paragraph [0021]), they fail to specifically disclose the selected air interface being a **UMTS air interface** and the first air interface format being **HSDPA**, the alternative air interface being **WLAN** and the second air interface format being **WLAN** frames.

However, the Examiner takes Official Notice of the fact that it was notoriously well known in the art at the time of invention by Applicant to select UMTS air interface and the first air interface format being HSDPA, the alternative air interface being WLAN and the second air interface format being WLAN frames for the advantages of being standardized wireless communication systems (See Background of Invention of the present application) which provide higher data transmission rates than communication systems from previous generations, such as 2G networks.

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to modify the selected air interface of Wood in combination with Dunlop and Stockhusen to be a UMTS air interface and the first air interface format to be HSDPA, the alternative air interface to be WLAN and the second air interface format to be WLAN frames as notoriously well known in the art for the advantages discussed above.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marivelisse Santiago-Cordero whose telephone number is (571) 272-7839. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MSC 9/11/07

MSC

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